

IIC REPORT

General Communication Corporation, N455A; DHC-3T; Aleknagik, Alaska; August 9, 2010

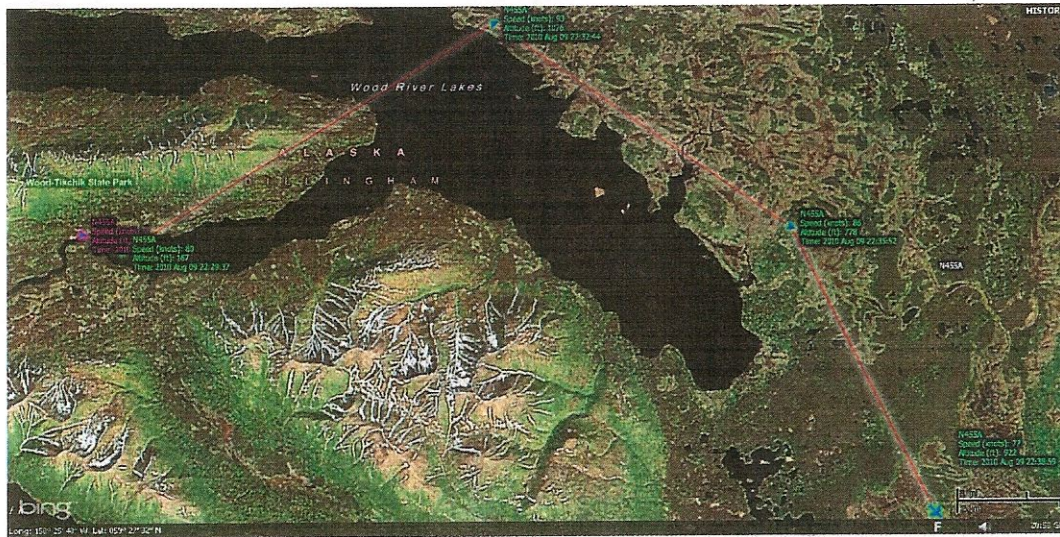
ALL INFORMATION HEREIN IS PRELIMINARY IN NATURE

Synopsis On August 9, 2010, at approximately 1445 Alaska Daylight Time (ADT)(UTC-8), a single engine, amphibious float equipped de Havilland DHC-3T Turbine Otter airplane, N455A, owned and operated by General Communication Corporation (GCI) was destroyed when it impacted mountainous tree-covered terrain, about 10 miles northeast of Aleknagik, Alaska. The airline transport pilot and four passengers were fatally injured, four passengers sustained serious injuries. The 14 Code of Federal Regulations, Part 91 flight was operating under visual flight rules at the time of the accident. Instrument meteorological conditions (IMC) were reported in the area at the time of the accident.



History of Flight At approximately 1427 ADT, N455A departed GCI's remote fishing lodge situated on the southwestern shoreline of Lake Nerka. The flight was en route a remote sport fishing camp about 20 miles east-southeast of Dillingham, Alaska. Company flight following procedures were in effect. According to GCI lodge personnel, the purpose of the flight was to transport 8 passengers to the HRM fishing lodge for an

afternoon of fishing, followed by a return to the GCI lodge for dinner. At approximately 1815 ADT, staff at the GCI Lodge noted that the flight had not returned and called HRM as well as Dillingham FSS in an attempt to locate the aircraft. When told by personnel at HRM that the aircraft had not arrived there nor had Dillingham Flight Service Station (FSS) had any contact with N455A, two other privately owned aircraft departed the lodge to search for the missing Turbine Otter. A GCI technician, based in Dillingham, which is located approximately 23 nautical miles southeast of the lodge, departed the airport (ADL) in a Robinson R-44 helicopter to join the search.



According to ADL FSS personnel, an Alert Notification (ALNOT) was issued at 1916 ADT. Additionally, two Cessna 207 aircraft, which were also in the area, joined the search. At 2005, the pilot of one of the aircraft reported that he had spotted N455A and relayed the coordinates of the accident site to FSS personnel. Subsequently, this information was provided the pilot of the R-44 with the accident location, which resulted in the pilot landing about 1,000 feet above the crash site. The GCI technician deplaned the helicopter and proceeded to the wreckage, while the pilot departed the area to a nearby airstrip in order to rendezvous with a doctor, which he then transported back to the initial landing site.

The site was to the left (east) of the flight aircraft's expected flight path, entering a pass between the Muklung Hills and an unnamed peak of 1,351 feet in height. The topographic map showed the floor of the pass to be slightly less than 400 feet MSL. The tundra between Lake Nerka and the pass was about 100 feet msl. The altitude of the wreckage was 900-1000 feet msl, according to both a USGS topographic map and reference to a handheld GPS altimeter. Two Muklung Hill peaks in front of the airplane were shown on the topographic map to be 2,309 feet and 2,170 feet in elevation; an aviation sectional map showed the Muklung Hills peak to be 2550 feet msl.



Injuries to Persons Of the nine people on board the aircraft, the pilot and four of the passengers suffered fatal impact injuries. The additional four passengers experienced serious injuries, ranging from broken bones, to serious internal injuries, cracked cervical vertebrae, back injuries, chest injuries, and lacerations. All four passengers are in various stages of recovery.

Damage to Aircraft The aircraft was destroyed by impact. The ventral fin from beneath the airplane tailcone was the first piece of debris and was found near the initial damage to the alder trees. This was prior to where the airplane contacted the ground. The leading edge of the ventral fin had tree strike damage. Debris from the forward tips of the floats was not in the area where the ventral fin from beneath the airplane tail was found in the alders.

The fuselage had broken at the windshield and down through the cockpit door openings, with the instrument panel and engine loosely held to the rest of the structure by some structural remnants at floor level. The top of the fuselage had also broken open in the area of the wing spars.

The forward (canted) bulkhead had been extensively torn apart, with the lower structural components either missing or twisted aft. The left end of the forward bulkhead had been above the massively flattened area of the left float. The upward deformation of the fuselage in the area also upwardly displaced the cabin floor and forward-most left cabin seat. The airplane had a post-manufacture modification to strengthen the original design around the landing gear attach fitting and the damage destroyed the reinforced structure.

The pilot experienced a dual engine failure on a Grumman Widgeon near Ravendale, California in September of 2009 during which he landed the aircraft on a gravel road with minor damage and no injuries. In April, 2009 the pilot lost power in a PA-18A in South Island, New Zealand during which he landed the aircraft with minor damage and no injuries.

Aircraft Information The aircraft, a de Havilland DHC-3, was manufactured in 1957, serial number 206. The aircraft underwent a conversion to a DHC-3T (turbine Otter) at the facilities of Kal-Air Repair, LTD, of Vernon, British Columbia. At the time of the conversion the airframe total time was listed as 7,889.9 hours and the total time on the engine since new was 7,262.8

Meteorological Information The disseminated METAR at Dillingham, approximately ten miles from the accident site is developed by data from the AWOS and information from weather observers. The METAR issued at 2222 UTC (1422 local) indicated the winds were from 170° at 10 knots, gusting to 17 knots, visibility was 3 statute miles in light rain and mist, clouds were scattered 800' overcast at 1300', the temperature 11°C, dewpoint 09, altimeter was 2957 (Remark: Cloud bases were scattered, variable and broken)

Communications The aircraft had a satellite phone for communication. This phone was located in the rear of the aircraft. The aircraft was also equipped with a SkyTracker GPS Vehicle Tracking System that has not been used for some time as coverage was thought not to be available in the Dillingham area. However, after the crash the box was sent to the manufacturer and it was found to contain data up to the time of the accident. This allowed the investigators to determine the aircraft's path from the lodge to the accident site.

Wreckage and Impact Information

Using the compass in a helicopter to determine heading into the accident site, the airplane struck the side of the Muklung Hills on a heading of 070 degrees. Using an aviation sectional map, a reference heading from the visible eastern shore of Lake Nerka (closest to the Muklung Hills ridgeline) to the center of the pass was 125 degrees. Beyond the pass, the heading to the HRM fishing camp was about 117 degrees.

At the first point of contact with trees on the hill, the upward slope of the terrain was about 30 degrees. The path crossed a slight ridge, and increased to about 40 degrees where the airplane came to rest. Broken alder bushes of about 8-10 feet in height and the disturbed ground of the hillside began about 100 feet downslope from the tail of the airplane.

An imprint in the ground led to the left float and that imprint was the first actual ground contact, followed immediately by the left nose wheel. (Most of the right nose wheel stayed with the right float.) The heaviest crush to the left float was on the bottom, immediately aft of the nose gear mounting, and the damage to the fuselage at the front left float attach point was diagonally up/aft.

The aft float spreader bar was the next identifiable piece of debris, found to the right side of the right float track. Uphill further and near the right float track were fragments from the inboard side of the right nose wheel. The forward spreader bar was found closer to the main wreckage, about ten feet aft of the right float.

To the left of the wreckage path, about 1/3 of the distance from the bottom of the wreckage path to top, the ground was also displaced and alder trees cut away in what from the air was an imprint of the left wing. The airplane's left wing tip had corresponding crush damage at the tip and along the leading edge. The left wing had rotated aft more than 45 degrees, with the trailing edge of the root and displaced fuselage sidewall intruding into the cabin occupiable space.

Both floats were found with the fuselage and had rolled so that the top surfaces were to the right. The left float was pressed to the left side of the fuselage and the right float was beneath the fuselage, displaced slightly aft and to the left. The right wing remained roughly perpendicular to the fuselage where the airplane came to rest. The structure that carried the mounting point for the wing strut was damaged; the tip of the wing was down and caught in the alder foliage.

Medical and Pathological Information Preliminary autopsy data showed that the pilot and four passengers had been fatally injured by blunt force trauma. Surviving passengers experienced broken and fractured bones, cracked cervical vertebrae, fractured sternum, lacerations and contusions. All surviving passengers experienced some degree of hypothermia by the time of rescue.


Fire There was no post crash fire

Survival Aspects

The most of the seats on this aircraft failed on impact. However they met the crash worthiness requirements at the time this aircraft was manufactured fifty years ago. The floor structure failed on impact and the fuselage was penetrated by the surrounding trees.

The Artex ME406 Emergency Locator Beacon (ELT) became detached from the bracket that secured it to the fuselage and was found lying on the floor in the aft section of the airplane. Both the antenna and power cable had separated from the unit. Preliminary information indicated that a signal was not received and this may have delayed the aircraft being located in a timely manner. The preliminary autopsies indicated that this delay was not a factor in the survival of the pilot and passengers that were fatally injured.





Victoria Anderson
Air Safety Investigator
October 20, 2009